



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/967,044	09/28/2001	Douglas T. Grider	TI-31118	4815

23494 7590 08/13/2003

TEXAS INSTRUMENTS INCORPORATED
P O BOX 655474, M/S 3999
DALLAS, TX 75265

EXAMINER

MALDONADO, JULIO J

ART UNIT	PAPER NUMBER
----------	--------------

2823

DATE MAILED: 08/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action

Application No.

09/967,044

Applicant(s)

GRIDER, DOUGLAS T.

Examiner

Julio J. Maldonado

Art Unit

2823

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 04 August 2003 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☒ The period for reply expires 2 months from the mailing date of the final rejection.
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
(a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
(b) ☐ they raise the issue of new matter (see Note below);
(c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
(d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____

3. ☐ Applicant's reply has overcome the following rejection(s): _____.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☐ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____

Claim(s) objected to: _____

Claim(s) rejected: 1-10.Claim(s) withdrawn from consideration: 11-13.

8. ☐ The proposed drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____.
10. ☐ Other: _____


George Fourson
Primary Examiner

Continuation of 5. does NOT place the application in condition for allowance because: Applicant's arguments filed 08/04/2003 have been fully considered but they are not persuasive:

Applicant argues, "...the Tsunoda patent does not teach forming a film with uniform concentration as stated and relied upon by the examiner. The scale shown in Fig.6 is qualitative and therefore meaningless as a measure of absolute nitrogen concentration...". In response to this argument, Fig.6 teach a concentration profile of the nitrogen concentration through line A1-A2, from point B1 to point B2, as illustrated in Fig.4. According to Fig.6, by following the procedure as described by Tsunoda, the nitrogen concentration in the dielectric layer is 4 atom percent (column 3, lines 6 - 16). Also, as shown in Fig.6, the nitrogen concentration is 4 atomic percent along the dielectric layer, therefore uniform as taught if Fig.3e of the claimed invention. Therefore, the examiner submits that Tsunoda does teach that the dielectric layer has a uniform concentration and that Fig.6 is not "meaningless" as agued by the applicant. Furthermore, applicants argue that there's no disclosure to eliminate the X-ray step in Tsunoda. However, the claims are operable to the step though the use of the open "comprising" language.

Also, referring to Fig.6 of Tsunoda, applicant argues, "...The nonlinearity of the concentration versus depthwise in the dielectric clearly teaches a non-uniform nitrogen concentration in the dielectric. This should be compared with Fig.3e of the instant invention where a straight line is shown indicating uniform nitrogen concentration. The Tsunoda patent clearly teaches a non-uniform nitrogen concentration and away from the uniform nitrogen concentration claimed in the claims of the instant invention..." In response to this argument, page 10, line 18 - page 12, line 15 of the submitted specification teaches processing conditions used to form the oxynitride layer of the claimed invention. Specifically, referring to page 12, lines 11 - 15 and Fig.4c, "...following the N2O anneal an oxynitride film with a uniform concentration of about 10 atomic percent is obtained...". From the concentration profile of Fig.4c, it can be seen a nonlinearity of the nitrogen concentration as well. Having this in mind, Tsunoda teaches, "...the oxynitride film 4 formed in the first embodiment of the invention has a nitrogen concentration C2 of about 4 atom %..." (column 3, lines 6 - 16). According to Tsunoda, the nitrogen concentration averages around 4 atomic percent. Therefore, based on the information disclosed in the specification, Tsunoda teaches an oxynitride layer with a uniform nitrogen concentration as claimed by the applicant..